

Application of Quadratic Functions

1. A flare is fired straight up from a sinking boat. The height of the flare given by the equation:

$$h = -5t^2 + 80t$$

where

- h is the height in metres.
- t is the time in seconds after it is launched.

a) What was the initial height of the flare?

b) What maximum height will the flare reach?

c) How long does it take the flare to reach the maximum height?

d) When will the flare hit the ground?